LUKICHEV, D.M., kandidat tekhnicheskikh nauk; NIKONOROV, V.A., inzhener; RASPOPOV, A.G., inzhener.

The Moscow Technical College's roller station for testing locomotives. [Trudy] MVTU no.43:6-23 '55. (MLRA 9:8)
(Locomotives--Testing)

LUKICHEV, D.M., kandidat tekhnicheskikh nauk, dotsent.

Shaping disk cams according to precise curves for mechanisms with vibrating roller followers. [Trudy] M V T U no.65:25-41 '5_.
(MLRA 9:8)

(Cams)

LUKICHEV, D.M.

PHASE I BOOK EXPLOITATION 1201

Moscow. Vyssheye tekhnicheskoye uchilishche

Voprosy teorii mekhanizmov i mashin (Problems of Theory of Mechanisms and Machines) Moscow, Mashgiz, 1958. 141 p. (Series: Its: [Sbornik] 77) 3,600 copies printed.

Ed. (Title page): Reshetov, L.N., Doctor of Technical Sciences, Professor; Ed. (Inside book): Martens, S.L., Engineer; Tech. Ed.: Tikhanov, A.Ya.; Managing Ed. for Literature on General Technical and Transport Machine Building (Mashgiz): Ponomareva, K.A., Engineer.

PURPOSE: This collection of articles is intended for personnel of engineering departments of machine-building plants.

COVERAGE: Articles in the collection discuss problems of the efficient design of machines and the investigation of machine dynamics. It is recommended that good machine operation be assured by means of proper design rather than by increasing production accuracy. The types of basic mechanisms meeting this requirement are described. The theory is given for approximate shaping of mechanisms with higher

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kinematic pairs — cams and cogwheels for large size transmissions. The use of electric methods for measuring mechanical quantities is discussed (balancing and measuring angular velocity oscillations and stresses in a piston connecting rod).

TABLE OF CONTENTS:

AVAILABLE: Library of Congress

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2-24-59

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SOV/122-58-8-3/29

AUTHORS: Reshetov, L.N., Doctor of Technical Sciences, Professor, and Lukichev, D.M., Candidate of Technical Sciences, Docent

TITLE: On the Design of Disc Cams with Circular Arc Contours (O proyektirovanii diskovykh kulachkov, ocherchennykh dugami okruzhnostey)

PERIODICAL: Vestnik mashinostroyeniya, 1958, Nr 8, pp 14-17 (USSR)

ABSTRACT: A new, analytical method is presented for designing cams having contours composed of circular arcs only. The follower is to move with constant acceleration when the cam rotates uniformly. Geometric relations are used to find the centres and radii of the arcs from the given data, so as to achieve the best approximation to uniform accelerations. An evaluation is given for the deviation from the mean acceleration. Numerical examples of applying the new method are given and a graph (Figure 3) shows the deviations from constant acceleration. There are 4 figures.

Card 1/1 1. Cams--Design 2. Mathematics

LUKICHEV, D.M., kand.tekhn.nauk, dotsent

Specified designs of disk cams having arched outlines. [Trudy] MVTU no.77:48-61 '58. (MIRA 11:9)
(Cams)

Lukichev, D.M.

25(2) P. 4 PHASE I BOOK EXPLOITATION SOV/2967

Akademiya nauk SSSR. Institut mashinovedeniya. Seminar po teorii mashin i mekhanizmov

Trudy, tom XIX, vyp. 74 (Transactions of the Institute of Machine Science, Academy of Sciences, USSR. Seminar on the Theory of Machines and Mechanisms, Vol 19, No. 74) Moscow, Izd-vo AN SSSR, 1959. 66 p. Errata slip inserted. 2,500 copies printed.

Scientific Supervisor of the Seminar: I. I. Artobolevskiy, Academician; Ed. of Publishing House: G. B. Gorshkov; Tech. Ed.: I. F. Koval'skaya; Editorial Board: I. I. Artobolevskiy, Academician (Resp. Ed.); G. G. Baranov, Doctor of Technical Sciences, Professor; V. A. Gavrilenko, Doctor of Technical Sciences, Professor; V. A. Zinov'yev, Doctor of Technical Sciences, Professor; A. Ye. Kobrinskiy, Doctor of Technical Sciences; N. I. Levitskiy, Doctor of Technical Sciences, Professor; N. P. Rayevskiy, Candidate of Technical Sciences; L. N. Reshetov, Doctor of Technical Sciences, Professor; and M. A. Skuridin, Doctor of Technical Sciences, Professor.

Card 1/4

PURPOSE: This book is intended for engineers interested in the theory of machines and mechanisms.

COVERAGE: The book consists of five scientific papers dealing with machines and mechanisms. The topics covered include dynamic principles of shockproof screens, electrical simulation of dynamic loads acting in mine hoisting equipment, dynamic loads in spur gears, an analytical method of designing cam profiles, and the analysis of forced vibrations in a system with a nonlinear restoring force. No personalities are mentioned. References follow several of the articles.

TABLE OF CONTENTS:

AVAILABLE: Library of Congress

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VK/Jmr
2-1-60

SAVELEVA, A.A., dotsent, kand.tekhn.nauk; LUKICHEV,D.M., dotsent, kand. tekhn.nauk; MUSATOV, A.K., starshiy prepodavatel'; NIKONOROV, V.A., kand.tekhn.nauk; RESHETOV, L.N., doktor tekhn.nauk, prof., red.

[Theory of mechanisms and machines; lecture course] Teoriia mekhanizmov i mashin; kurs lektsii. Moskva, Kafedra teorii mekhanizmov i mashin. No.3. ["Dynamicsof mechanisms and machines."] Razdel "Dinamika mekhanizmov i mashin." 1959. 101 p.
(MIRA 14:7)

(Machinery, Kinematics of)

RESHETOV, L.N.; LUKICHEV, D.M.

New method for calculating the profile of cams outlined by circle arcs. Trudy Inst. mash. Sem. po teor. mash. 19 no.74:47-57 '59. (MIRA 13:2)

(Cams)

S/145/60/000/003/003/010
D221/D301

AUTHOR: Lukichev, D.M., Candidate of Technical Sciences, Docent

TITLE: Profiling cams with arcs of circles in the case of eccentric and rotary followers

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Mashinostroyeniye, no. 3, 1960, 26 - 38

TEXT: The author introduces a new method of calculating cams with rotary and eccentric followers. An example is given of a mechanism with a sharp follower. The basic kinematic diagrams illustrated in Fig. 1 indicate the mean acceleration a, speed v, displacement s, as a function of time. In the case of a rotary follower, the above would be the analogous angular magnitudes ε, ω_φ, γ_φ. It is assumed that the cam rotates with a uniform speed ω, and therefore, its angle of swivel φ is also shown. The initial magnitudes are as follows: Angle of rotation of cam for the forward and return motion of the follower, φ_0 and φ_0'*; stroke of follower, h (or γ_T); initial

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Profiling cams with arcs of ...

radius of cam r_1; the ratio of mean acceleration $\nu = a_1/a_2$ (or ratio of angles φ_1/φ_2) for the section of acceleration and deceleration of the follower. In the case of an eccentric follower this should be supplemented by e (eccentricity), or by the length of follower R_2 and the center distance when the rotary follower is used. If there is a dwell, then the corresponding angle must be given (φ_B in Fig. 1). The author quotes known equations that relate ν with φ_1 φ_2 as well as with h_1 and h_2 in the sections of acceleration and deceleration. After assigning various angles, the relationship between angles δ and φ is determined for eccentric and rotary followers. In both cases, the cam angle is formed by adding or subtracting the supplementary angle β, to the angle of cam rotation φ. The former is determined by tangents which are defined by equations. The sign β depends on the sign of eccentricity e, or the direction of rotation of the follower in respect of the cam. In the zone of accelerations, the cam profile will be either convex, concave or rectilinear, whereas in the region of deceleration it is always con-

Card 2/4

vex. The distances between the centers of the cam and the arcs are designated by R_1 and R_2, and those between the centers of arcs and the points of profile - by L_1 and L_2. A set of equations is deduced from triangles of the diagrams. They result in a quadratic equation of the approximate type of $aR^2_1 + bR_1 + c = 0$, where a, b and c are coefficients which can be defined by the pertinent equations. The solution of the quadratic equation provides the value of R_1, and this in turn allows the magnitude of R_2 to be calculated. The final values of angles δ_o, δ_1 and δ_2 are obtained together with L_1 and L_2 from equations due to Professor L.N. Reshetov (Ref. 1: Kulachkovyye mekhanizmy (Cam Mechanisms), Mashgiz, 1953). The cam profile for the return motion of the follower is calculated by the equations of the working stroke, and by considering the rotation of the cam as being opposite to the actual travel. Consequently, the sign of the supplementary angle β, should be changed. During design, when selecting the minimum radius r_1 it is necessary to take into account that the smaller the pressure angle α in the transition point of the profile, the smaller are the deviations of mean acceleration.

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Profiling cams with arcs of ...

Two examples are given for the numerical application of the above. There are 7 figures and 2 Soviet-bloc references.

ASSOCIATION: MVTU im. Baumana (MVTU im. Bauman)

SUBMITTED: December 4, 1959

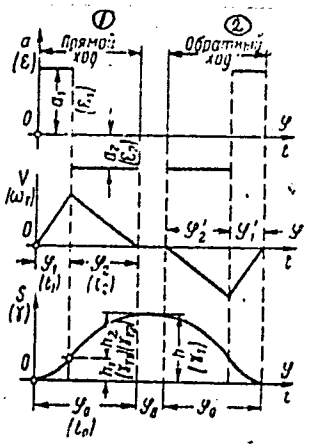

Fig. 1.
Legend: 1 - Working stroke;
2 - return stroke.

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POPOV, S.A., kand. tekhn. nauk, dots.; LUKICHEV, D.M., kand. tekhn. nauk, dots.; SKVORTSOVA, N.A., kand. tekhn.nauk, dots.; NIKONOROV, V.A., kand. tekhn. nauk, dots.; MINUT, S.B., dots.; RESHETOV, L.N., doktor tekhn. nauk, prof.; NIKOLAYEVSKIY, Ye.V., assist.; MASTRYUKOVA, A.S., kand. tekhn. nauk;

[Theory of mechanisms] Teoriia mekhanizmov; kurs lektsii. [By] S.A.Popov i dr. Pod red. L.N.Reshetova. Moskva, No.5. 1962. 123 p. (MIRA 16:7)

1. Moscow. Moskovskoye vyssheye tekhnicheskoye uchilishche. (Mechanisms)

SKVORTSOVA, N.A., kand.tekhn.nauk, dotsent; LUKICHEV, D.M., kand.tekhn.nauk, dotsent

Selection of parameters of involute internal gears. Vest.mashinostr. 44 no.3:3-9 Mr '64. (MIRA 17:4)

LUKICHEV, I. K., Eng.

Wood Waste

Mechanize the processing of waste from the match and plywood industries.
Der. i leseskhim. prom. 1 No. 7, 1952

Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.

LUKICHEV, I.K.

Mechanization of industrial processes in the match industry.
Der. prom. 6 no.4:23-24 Ap '57. (MLRA 10:6)

1. Glavfanspichprom.
(Match industry)

BERDINSKIKH, Ivan Pavlovich; LUKICHEV, I.K., red.; PROTANSKAYA, I.V., red.izd-va; KORNYUSHINA, A.S., tekhn.red.

[Veneering] Fanerovanie drevesiny. Moskva, Goslesbumizdat, 1960. 103 p. (MIRA 13:11)
(Veneers and veneering)

GAVRILENKO, V.A., doktor tekhn.nauk, prof. Prinimali uchastiye: DAVIDOV, Ya.S.; SKVORTSOVA, N.A.; LUKICHEV, M.S.; REZEZOVA, N.Ye.; CHASOVNIKOV, L.D., kand. tekhn. nauk, retsenzent; DAVIDOV, Ya.S., kand. tekhn. nauk, red.; MERENSKAYA, I.Ya., red. izd-va; UVAROVA, A.F., tekhn. red.

[Gear transmissions in the manufacture of machinery; theory of involute gears]Zubchatye peredachi v mashinostroenii; teoriia evol'ventnykh zubchatykh peredach. Moskva, Mashgiz, 1962. 530 p. (MIRA 15:11)

(Gearing)

SHESTOPEROV, S.V., doktor tekhnicheskikh nauk; BOGIN, N.M., kandidat tekhnicheskikh nauk; IVANOV, G.S., inzhener; LUKICHEV, N.A., inzhener; DAVYDOV, L.S., inzhener; GROMOV, V.S., inzhener; POPOV, N.A., inzhener; ZHURAVLEV, G.M., master.

Vibrators for making wire reinforced ties on stands. Transp.stroi. 6 no.3:12-14 Mr '56. (MLRA 9:7)
(Railroads--Ties, Concrete)

LUKICHEV, V.F., inzh.

Headframes with two-sided arrangement of mining machines and winches. Shakht.stroi. no.1:12-15 Ja '60. (MIRA 13:5)

1. Giprotsvetmet.
(Shaft sinking--Equipment and supplies)

BANKETOV, A.K., gornyy inzh.; LUKICHEV, V.F., gornyy inzh.; STABAKOV, B.A., gornyy inzh.

Review of the book "Upraising" by S.G. Borisenko and others. Reviewed by A.K. Banketov, V.F. Lukichev, B.A. Stebakov. Gor. zhur. no.7:78-79 Jl '63. (MIRA 16:8)

1. Gosudarstvennyy vsesoyuznyy institut po proyektirovaniyu i nauchno-issledovatel'skim rabotam tsementnoy promyshlennosti, Moskva.

CHERNYAK, I.L., gornyy inzh.; LUKICHEV, V.S., gornyy inzh.

Predicting soil heaving in workings of Moscow Basin mines. Nauch. trudy MGI no.38:97-103 '61. (MIRA 15:10)
(Moscow Basin--Soil mechanics)

~~USSR/Geography - Forests~~ LUKICHEVA, A. N. Mar/Apr 52

"The Geographical Distribution of the Forest Vegetation of the West Siberian Lowland," V. B. Sochava, T. I. Isachenko, and A. N. Lukicheva

Iz V-s Geog Ob, Vol 85, No 2, pp 125-138

Presents detailed geobotanical survey with detailed charts of the forest vegetation in the West Siberian lowland. Describes the peculiarities of the zonal mixing of the basic group of vegetational associations.

257T75

SOCHAVA, V.B.; LUKICHEVA, A.N.; SUKACHEV, V.N., akademik.

Geography of the dwarf pine [Pinus pumila Rgl.]. Dokl. AN SSSR 90 no. 6:1163-1166 Je '53. (MLRA 6:6)

1. Botanicheskiy institut im.V.L.Komarova Akademii nauk SSSR. 2. Akademiya nauk SSSR (for Sukachev). (Pine)

LAVRENKO, Ye.M., redaktor; LIPSHITS, S.Yu., redaktor; SOCHAVA, V.B., redaktor; SHISHKIN, B.K., redaktor; LUKICHEVA, A.N., redaktor; YAKOVLEVA, V.M., redaktor izdatel'stva; TVERITINOVA, K.S., tekhnicheskiy redaktor

[To Academician V.N.Sukachev on the 75th anniversary of his birth; a collection of works on geobotany, silviculture, paleogeography and floristics] Akademiku V.N.Sukachevu k 75-letiiu so dnia rozhdeniia; sbornik rabot po geobotanike, lesovedeniiu, paleogeografii i floristike. Moskva, Izd-vo Akademii nauk SSSR, 1956. 592 p. (MLRA 9:10)

1. Vsesoyuznoye botanicheskoye obshchestvo.
(Sukachev, Vladimir Nikolayevich, 1880-)
(Botany)

LUKICHEVA, A.N.

Vegetation cover as an indicator of kimberlite pipes. Geol. i geofiz. no.11:35-48 '60. (MIRA 14:2)

1. Botanicheskiy institut im.B.L.Komarova AN SSSR, Leningrad.
(Yakutia--Kimberlite)

LUKICHEVA, Antonina Nikolayevna; TYULINA, L.N., otv. red.; CHUKULAYEVA, Ye., red.izd-va; KRUGLIKOVA, N.A., tekhn. red.

[Flora of northwestern Yakutia and its relation to the geological structure of the locality] Rastitel'nost' severo-zapada IAkutii i ee sviaz' s geologicheskim stroeniem mestnosti. Moskva, Izd-vo AN SSSR, 1963. 166 p. (MIRA 17:1)

LUKICHEVA, A. N.

Vegetation of the Upper Muna Valley (northwestern Yakutia) and the effect of recent tectonics on it. Bot. zhur. 48 no.3: 328-340 Mr '63. (MIRA 16:4)

1. Botanicheskiy institut imeni V. L. Komarova AN SSSR, Leningrad.

(Muna Valley(Yakutia)—Botany—Ecology)

LUKICHEVA, A. N.; BOCH, M. S.

Activities of the Section of Flora and Vegetation of the All-Union Botanical Society in 1961-1962. Bot. zhur. 48 no.3: 467-469 Mr '63. (MIRA 16:4)

1. Botanicheskiy institut imeni V. L. Komarova AN SSSR, Leningrad.

(Botanical research)

LUKICHEVA, A.N.

Vegetation cover of the southern taiga of central Siberia as an indicator of the geological structure; as illustrated by the Verkholenskian series in the region of Ust'-Kut. Sib. geog. sbor. no.3:104-133 '64. (MIRA 18:3)

L 26524-66 EWT(1) GW/GS

ACC NR: AT5027653 SOURCE CODE: UR/0000/65/000/000/0032/0039

AUTHOR: Lukicheva, A.N.

ORG: none

TITLE: Possibilities of utilization of large scale geobotanical maps in geological mapping

SOURCE: AN SSSR, Botanicheskiy institut. Geobotanicheskoye kartografirovaniye (Geobotanical mapping), 1965. Moscow, Izd-vo "Nauka", 1965, 32-39

TOPIC TAGS: mapping, plant ecology, geologic survey, physical geology

ABSTRACT: This paper discusses prospect of large scale (1:50,000 to 1:200,000) geobotanical maps of vegetation distribution, as sources of geological information. The utilization of vegetation complexes as indicators of the geological environment is gaining in scientific as well as in practical importance. The Siberian platform is particularly promising for such studies. The response of vegetation to geological conditions is here enhanced by a number of regional and geophysical factors, such as e.g. slow tectonic changes and the consequences of a sharply continental climat. Vegetation mapping can serve as an important method in the studies of botanical-geological relationships. Correlation of associative vegetation classes with shallow geological deposits is illustrated on a key geobotanical map of the upper reaches of the river Markha in

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ACC NR: AT5027653

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the basin of the river Daidyn. It can be seen how, on the basis of a geobotanical map showing vegetation complexes, one can trace the lithologically different geological horizons, to which correspond various distinct inhomogeneous geological deposits. It becomes clear that a geobotanical map comprising vegetation complexes specific to lithologically different geological horizons supplies information on the stratigraphic structure of sedimentary layers. The importance of vegetation complexes as indicators is enhanced by the good indication of vegetation differences on aerial maps; this facilitates the decoding of vegetation-oriented information for geological purposes. Relations between vegetation and geological structures are discussed in connection with the methodology of vegetation mapping. Orig. art. has 1 figure.

SUB CODE: 06, 08/ SUBM DATE: 15Feb65/ ORIG REF: 014/ OTH REF: 000

Card 2/2

L 22064-66
ACC NR: AP6001423 (A,N) SOURCE CODE: UR/0319/65/050/009/1268/1275

AUTHOR: Sochava, V. B.; Lukicheva, A. N.; Zubkov, A. I.; Korchagin, A. A.; Rodin, L. Ye.; Semenova-Tyan-Shaskaya, A. M.

ORG: Botanical Institute im V. L. Komarova, Academy of Sciences, SSSR, Leningrad (Botanicheskiy institut Akademii nauk SSSR) Geography Institute of the Siberian Division of the Academy of Sciences, SSSR, Irkutsk (Institut geografii Sibirskogo otdeleniya Akademii nauk SSSR)

TITLE: Main developmental periods of continental vegetation cartography

SOURCE: Botanicheskiy zhurnal, v. 50, no. 9, 1965, 1268-1275

TOPIC TAGS: botany, mapping, physical geography, cartography

ABSTRACT: In 1964 a Physicogeographical Atlas of the World prepared with the assistance of various scientific institutes was published by the Main Board of Geodesy and Cartography. This major work includes a large number of new detailed vegetation maps of the world drawn by a group of 6 Soviet geobotanists, the authors of the article. The literature sources for these new maps are described. The authors point out that the data on which the small scale vegetation maps are based are

Card 1/2 UDC: 528.9:339.44:551.4

L 22064-66

ACC NR: AP6001423

not equally detailed for all countries and natural regions. The study of the earth's vegetation cover is divided into 4 periods. The first period is largely based on Schroter's works and ends in 1910, the second period covers the years up to the Second World War, the third period covers the 1940's and 1950's. Vegetation cartography now is in its fourth period of development marked by more detailed small scale geobotanic maps of the continents composed with international cooperation. Geobotanical survey maps are gradually assuming greater importance in solving various economic and social problems. Orig. art. has: none.

SUB CODE: 06, 08/ SUBM DATE: 30Mar65/ ORIG REF: 020/ OTH REF: 106

Card 2/2 WMS

SOV/137-57-10-18591

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 10, p 17 (USSR)

AUTHORS: Lukicheva, T.P., Starikova, L.V.

TITLE: Flotation of Lean Polymetallic Ore (Flotatsiya ubogoy polimetailicheskoy rudy)

PERIODICAL: Nauchn. raboty stud. Sverdl. gorn. in-t, 1957, Nr 3, pp 85-97

ABSTRACT: A description is presented of laboratory experiments in bulk flotation (F) of ore containing sulfides of Pb, Cu, Zn, Mo, and Fe. The total sulfides content is ~ 4%. The following optimum F conditions are established: 20 min grinding time, which signifies reduction of 87% to -200 mesh, pH 7.5-8, and F time 10 min. Analysis of the concentration products shows that the finer sulfide classes go into the 1st concentrate and that as F time increases the size of the sulfide grains undergoing flotation also rises. To eliminate overcomminution of the material it is recommended that the middlings (M) of the first and last middlings cells of the flotation machine be treated separately. The larger M of the last cells should be sent for regrinding, and the smaller M of the first cells

Card 1/2

Flotation of Lean Polymetallic Ore

should either go to the head of the F process or to further grinding, this time for a shorter time.

M.L.

Card 2/2

1. DOBRUNOV, L. G.; GLADYSHEVA, O. M.; LUKICHEVA, Ye. L.

2. USSR (600)

4. Aral Sea Region - Afforestation

7. Accelerating the growth of trees during afforestation of the dunes in the Northern Aral Sea Region. Vest. AN Kazakh. SSR No. 4, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953. Unclassified.

LUKICHEVA, Ye.

Physiological and biochemical study of different varieties of cotton plants. Vest.AN.Kazakh.SSR 16 no.5:90-91 My '60. (MIRA 13:7)

(Cotton--Varieties)

GLADYSHEVA, O.M.; LUKICHEVA, Ye.L.

Investigating water relations of tree species growing on Bol'shiye Barsuki sands. Izv. AN Kazakh. SSR. Ser. bot. i pochv. no.1:57-66 '61. (MIRA 14:4)

(Aktyubinsk Province—Trees—Water requirements)

LUKICHEVA, Ye.L.

Some physiological features of cotton varieties with different ripening time. Trudy Inst. bot. AN Kazakh. SSR. 12:134-143 '62. (MIRA 15:5)

(Kazakhstan--Cotton--Varieties)

LUKICHEVA, Ye.L.

Age-related changes in the oxidation-reduction processes and their variation at different levels of the plant in cotton varieties differing by the ripening time. Trudy Inst. bot. AN Kazakh. SSR 16:157-165 '63 (MIRA 17:8)

POLIMBETOVA, F.A.; BELOSLYUDOVA, L.F.; LUKICHEVA, Ye.I.

Effect of water supply on the oxidizing and reducing activity of spring wheat. Trudy Inst.bot.AN Kazakh.SSR 20:23-35 '62. (MIRA 18:1)

LUKIERSKI, J.

The isorepresentations of leptons. Bul Ac Pol mat 8 no.8:553-557 '60.

1. Department of Theoretical Physics, University, Wroclaw. Presented by L. Infeld.

(Physics)

LUKIERSKI, J.

The global symmetry in weak interactions. Bul Ac Pol mat 8 no.11/12: 803-806 '60.

1. Institute of Theoretical Physics, University, Wroclaw. Presented by L. Infeld.

(Physics)

P/045/60/019/004/007/009
B022/B070

AUTHOR: Lukierski, Jerzy

TITLE: The Generalization of Dirac's Equation. I

PERIODICAL: Acta Physica Polonica, 1960, Vol. 19, No. 4, pp. 499 - 511

TEXT: An equation invariant with respect to the 12-parameter CXC' group for a spin-1/2 field interacting with an electromagnetic field is investigated. The transformation groups C and C' are defined as follows:

$$C : \psi' = e^{i\gamma_\mu\gamma_\nu a_{\mu\nu}}\psi, \quad \partial'_\mu = a_{\mu\nu}\partial_\nu \qquad C' : c'_\alpha = ac_\alpha + bc^*_{\dot\alpha} \quad ad - bc = 1$$
$$c^{*}_{\dot\alpha} = cc_\alpha + dc^*_{\dot\alpha}$$

with c_α and $c^*_{\dot\alpha}$ as Weyl's 2-spinors. The groups C and C' are treated symmetrically. The author applies CXC' to Dirac's equation $\hat{D}\psi = (\gamma_\mu\partial_\mu - m)\psi = 0$ and the same equation with electromagnetic field

Card 1/3

The Generalization of Dirac's Equation. I P/045/60/019/004/007/009
B022/B070

$\{\gamma_\mu(\partial_\mu - ieA_\mu) - m\}\psi = 0$, and shows (sections 1 and 2) that mass m and charge e must be replaced by the operators $\hat{M}$ and $\hat{E}$, which transform with respect to C' as an isovector and an antisymmetric isotensor of the second rank, respectively. (Isotransformations with respect to a given equation are defined as those transformations which are permitted by this equation and commute with the proper Lorentz group C). The equation containing A_μ then appears as the general equation containing $\hat{M}$ and $\hat{E}$ written in a special representation of the mass isovector and char.) isotensor. In the case $A_\mu = 0$, the mass isovector components $x_{;\mu}$ in the general equation are included symmetrically with the momentum operators $i\partial_\mu$ (section 6). This symmetry is most clear when one goes over to the corresponding second-rank equation $(\Box - \varkappa^2_{;\mu})\psi = 0$. It is seen that the momentum in the ordinary space and the mass vector components in the isospace appear symmetrically in the last equation. From this equation, after some restrictions, the author obtains the generalized Pais equation introduced by Rayski (Ref.4). The charge conjugation cannot be

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The Generalization of Dirac's Equation. I P/045/60/019/004/007/009
B022/B070

realized by means of C'. It is obtained as a product of two isoinversions. In a special representation of the author's equation which corresponds to Dirac's equation, the first isoaxis and isotime are reversed. The existence of a charge gauge group is investigated. There are 6 references: 2 Polish, 3 Italian, and 1 Japanese.

ASSOCIATION: Institute of Theoretical Physics, University of Wrocław

SUBMITTED: January 16, 1960

Card 3/3

LUKIERSKI, J.

On the antilinearization of the Klein-Gordon equation for 4-spinor. Bul Ac Pol Mat 9 no.4:317-321 '61.

1. Institute of Theoretical Physics, Wroclaw, University. Presented by L. Infeld.

LUKIERSKI, Jerzy

The generalisation of Dirac's equation II. Acta physica Pol 20 no.7:517-535 '61.

1. Institute of Theoretical Physics, University, Wroclaw.

LUKIERSKI, Jerzy

The spinor space as an Euclidean complex space. Acta physica Pol 20 no.12:957-967 '61.

1. Institute of Theoretical Physics, University of Wroclaw, Wroclaw.

(Particles(Nuclear physics))

LUKIERSKI, Jerzy

Mass as isovector. Matem fizyka astronom Wroclaw 3:77-86 '62.

Electric charge as isotensor. Ibid.:87-91

1. Institute of Theoretical Physics, University, Wroclaw.

LUKIEWICZ, S.

FOLIA BIOLOGICA. (Polska Akademia Nauk. Zakiad Zoologii Doswiadczalnej) Warszawa. (Journal on morphogenesis, genetics, and evolution issued by the Laboratory of Experimental Zoology, Polish Academy of Sciences; with English, French, and Russian summaries.)

Physical factors determining the lethal action of electric fields on Xenopus laevis Daud. tadpoles. p. 267.

Vol. 5, No. 4, 1957

Monthly List of East European Acessions (EEAI), LC, Vol. 8, No. 3, March 1959
Unclass.

LUKIEWICZ, Stanislaw; LUKIEWICZ, Wanda

Resistance to the alternating current of the whole organism of some amphibia. Folia biol 7 no.2:135-166 '59. (EEAI 9:11)

1. Aus dem Institut fur Experimentelle Zoologie der Polnischen Akademie der Wissenschaften in Krakow. Leiter: Prof. Dr.S.Skowron.
(ELECTRIC CURRENTS, ALTERNATING)
(ELECTROPHYSIOLOGY)

LUKIEWICZ,S.;KOROSODA,W.

A modified apparatus for the measurement of electrokinetic potentials. Folia biologica 9 no.4:309-318 '61

1. Department of Experimental Zoology, Polish Academy of Sciences, Krakew, Head: Pref. dr. S. Skowron and Department of Plant Physiology, Polish Academy of Sciences, Krakew. Head: F.Gorski, Ph.D.

LUKIEWICZ, S.

Polar action of electric fields on living organisms. Pt. 1.
Folia biol 10 no. 1:5-35 '62.

1. Department of Experimental Zoology, Polish Academy of Sciences, Krakow. Head: Prof. Dr. S. Skowron.

KOROHODA, W.; LUKIEWICZ, S.

Electrophoretic studies on plant cells, Pt. 1. Folia biol 11 no.1:11-17 '63.

1. Department of Plant Physiology, Polish Academy of Sciences; Head: F. Gorski, Ph.D. and Department of Experimental Zoology, Polish Academy of Sciences, Krakow.; Head: S.Skowron, Ph.D.

LUKIEWICZ, Stanislaw; LUKIEWICZ, Wanda

Resistance to the alternating current of the whole organism of some amphibia. Folia biol 7 no.2:135-166 '59. (EEAI 9:11)

1. Aus dem Institut fur Experimentelle Zoologie der Polnischen Akademie der Wissenschaften in Krakow. Leiter: Prof. Dr.S.Skowron.
(ELECTRIC CURRENTS, ALTERNATING)
(ELECTROPHYSIOLOGY)

LUKIMSKIY, A.P.; RUMSH, M.A.; KARPOVICH, I.A.

Geiger counters for recording soft and ultrasoft X-radiation.
Zav.lab. 29 no.4:495-496 '63. (MIRA 16:5)

1. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova.
(X rays) (Geiger-Müller counters)

LUKIN, A. A.

S/560/62/000/013/008a/009

AUTHOR: Kovyazin, N. V., A. A. Lukin, and G. P. Parfenov

TITLE: Effect of factors in the flight of the spaceship-satellite "Vostok-2" on microorganisms (investigation of yeast organisms with various ploid numbers)

PERIODICAL: Akademiya nauk SSSR. Iskusstvennyye sputniki Zemli, no. 13, 1962, 123-129

TEXT: Experiments were conducted with true haploid *Zygosaccharomyce s Bailii* and diploid *Saccharomyces vini* (Megri 139-B strain) yeast cells grown in agar cultures and placed in aqueous suspensions. Small concentrations of oleic acid ($47 \cdot 10^{-2}$ to $47 \cdot 10^{-8}$%) were added to some of the suspensions as a sensitizing agent. Spaceflight factors had no adverse effect on either haploid or diploid cells in the absence of oleic acid. However, the addition of $47 \cdot 10^{-8}$% oleic acid caused a sharp increase in the sensitivity of haploid cells to these

Card 1/2

factors; their survival rate fell to 50.6%. No such effect was noted on diploid cells. It is concluded that the resistance to spaceflight factors of yeast cells in the presence of oleic acid is dependent on their ploid numbers.

UDODOV, P.A.; ROGOV, G.M.; RASSKAZOV, N.M.; SHVARTSEV, S.L.; LUKIN, A.A.

Concerning E.E. Beliakova's article "Principles and methods of compiling prognostic hydrochemical maps of ore deposits." Sov. geol. 6 no.10:154-157 O '63. (MIRA 17:1)

1. Tomskiy politekhnicheskiy institut i Sibirskiy nauchno-issledovatel'skiy institut geologii, geofiziki i mineral'nogo syr'ya.

PREISSLER, B. dipl. inz.; LUKIN, A., dipl. inz.

Synthetic glues in the furniture industry. Kem ind 13 no.10:807-813 O '64.

ZHARIKOVA, G.G.; KOVYAZIN, N.V.; LUKIN, A.A.; MITROKHOVA, T.N.; SAVCHENKO, G.V.; SILAYEV, A.B.; SUSHKOVA, I.V.

Production of gramicidin C by the flat form of Bacillus brevis var. GB. Antibiotiki 8 no.3:228-232 Mr'63 (MIRA 17:4)

1. Laboratoriya antibiotikov i kafedra genetiki biologo-pochvennogo fakul'teta Moskovskogo universiteta imeni Lomonosova.

LUKIN, A. A.

LUKIN, A. A. -- "An Investigation of the Impulse Method of Mass Spectrometric Analysis of the Composition of Gaseous Mixtures." Cand Tech Sci, Moscow Power Engineering Inst, Moscow 1953. (Referativnyy Zhurnal--Fizika, Jan 54)

SO: SUM: 188, 22 July 1954

KAGANOV, I.L.; LUKIN, A.A.

Semiconductor power amplifiers fed by an alternating tension. Nauch.dokl.vys.shkoly; radiotekh. i elektron.no.1:264-274 '58. (MIRA 12:1)

1. Kafedra promyshlennoy elektroniki Moskovskogo energeticheskogo instituta.

(Transistor amplifiers)

LUKIN, A.A., kand.tekhn.nauk

Controlled RC-generators using transistors. Trudy MEI no.27: 326-329 '58. (MIRA 13:4)
(Transistor amplifiers)

SOV/119-59-7-4/18

9(6)

AUTHORS: Yerofeyev, A. V., Candidate of Technical Sciences, Lukin, A. A., Candidate of Technical Sciences

TITLE: A Semiconductor Amplifier for Automatic Electronic Bridges and Potentiometers

PERIODICAL: Priborostroyeniye, 1959, Nr 7, pp 11-14 (USSR)

ABSTRACT: For the measurement, control, and recording of various pyrometric quantities, automatic electronic potentiometers and compensation bridges are being widely used. The advantages offered by semiconductor circuits compared to tube circuits are pointed out, after which the cascade amplifier shown in figure 1 is discussed. The characteristic lines of the collector circuit shown in figure 2 and the influence exercised by temperature (Fig 2) upon the input characteristic is dealt with. Consideration of the temperature influence, which causes greater amplification at rising temperature, is dealt with, and in this connection figure 4 shows the characteristic lines of the collector circuit in the case of the lack of nonlinear distortion. The scheme of an amplifier shown in figure 6 is then dealt with, and in this connection the temperature characteristic, the current supply,

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A Semiconductor Amplifier for Automatic Electronic Bridges and Potentiometers

and the voltages between collector and emitter are discussed. For the latter, the diagram of figure 7 is shown. In the last part of the present paper checking of these amplifiers is dealt with. The error in these devices must not exceed 0.1%, which corresponds to a temperature variation of 0.05°C in a bridge for the measurement range of 0 - 50°C. The influence of voltage fluctuations of the current source was very low. In conclusion, it is said that the use of semiconductor amplifiers in automatic potentiometers and compensation bridges is possible. There are 7 figures.

ASSOCIATION: Kafedra promyshlennoy elektroniki Moskovskogo ordena Lenina energeticheskogo instituta (Chair for Industrial Electronics of the Moscow Order of Lenin Institute of Power Engineering)

35341
S/194/62/000/001/056/066
D201/D305

9,2570

AUTHORS: Lukin, A. A. and Gorbachev, G. N.

TITLE: A highly economical transistor power amplifier

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 1, 1962, abstract 1-7-186g (Tr. Mosk. energ. in-ta, 1961, no. 34, 49-57)

TEXT: A transistorized high efficiency power amplifier is considered. The amplifier is supplied directly from a.c. mair.. The high efficiency is achieved owing to the switching mode of operation of transistors. A PA is used for applying the control signals to the bases of transistors. The amplifier designed has shown good exploitation properties and good efficiency. 1) A power of up to 25 OW may be controlled using a single П-4 (P-4) transistor, with a voltage of 50 V amplitude applied to the transistor and the load resistance of about 5 ohms; 2) the efficiency is independent of the magnitude of the input signal and is 0.9 - 0.95 (without the efficiency of the transistor itself); 3) a high reliability and stabili-

Card 1/2

A highly economical ...

ty with respect to mechanical overloading; 4) economy and lower amplifier cost, as compared with electromagnetic and magnetic amplifiers handling the same currents and powers. 6 references. [Abstracter's note: Complete translation.]

Card 2/2

S/142/62/005/003/003/009
E140/E435

AUTHORS: Kaganova, G.I., Lukin, A.A.

TITLE: Standard logical element for digital computers

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiotekhnika, v.5, no.3, 1962, 331-338

TEXT: The article constitutes a survey of "NOR" transistor circuits described in American literature from 1956 to 1959. Some experimental work is described to compare the relative response speeds of various configurations. For example, with the Soviet transistor П402 (P402) the circuit with forcing inductance had a rise time of 0.5 μs with forcing capacitance 0.25 μs, with unsaturated transistor 0 μs. There are 6 figures and 2 tables.

ASSOCIATION: Kafedra promyshlennoy elektroniki, Moskovskiy ordena Lenina energeticheskiy institut (Industrial Electronics Department Moscow Order of Lenin Power Engineering Institute)

SUBMITTED: August 29, 1961 (initially)
November 3, 1961 (after revision)

Card 1/1

KOVYAZIN, N.V.; LUKIN, A.A.; PARFENOV, G.P.

Effect of the factors of the space flight of the Vostok 2 spaceship on microorganisms (investigation on yeast organisms of different ploidity). Isk.sput.Zem. no.13:123-129 '62. (MIRA 15:7)

(Space microbiology)

KOVYAZIN, N.V.; LUKIN, A.A.; F...FENOV, G.P.

Effect of the factors of space flight in the Vostok-2 spaceship on haploid and diploid yeast organisms. Probl.kosm.biol. 2:149-152 '62. (MIRA 16:4)

(SPACE FLIGHT--PHYSIOLOGICAL EFFECT)
(YEAST) (CHROMOSOME NUMBERS)

KAGANOVA, G.I.; LUKIN, A.A.

Standard cell for the logic blocks of digital computers.
Izv. vys. ucheb. zav.; radiotekh. 5 no.3:331-338 My-Je '62.
(MIRA 15:9)

1. Rekomendovana kafedroy promyshlennoy elektroniki Moskovskogo ordena Lenina energeticheskogo instituta.
(Electronic digital computers)

FYN SI-SHAN' [Fêng Hsi-shan]; LUKIN, A.A.

Transient processes in semiconductor diodes with short d.c. pulses.
Trudy MEI no.50:75-92 '63. (MIRA 17:12)

STOLETOV, V.N.; LUKIN, A.A.

Studies on the effect of streptomycin and penicillin on the dissociation of Bacillus brevis var. G-B. Antibiotiki 10 no.1:23-26 Ja '65. (MIRA 18:4)

1. Kafedra genetiki biologo-pochvennogo fakul'teta Moskovskogo universiteta imeni Lomonosova.

L 31329-66 EWT(d)/EWT(1)/EWT(m)/EWP(f)/T-2 WW
ACC NR: AR5025473 SOURCE CODE: UR/0273/65/000/008/0039/0039

AUTHOR: Lukin, A. A.; Glebov, B. A.; Golikov, V. Yu. 15 B

TITLE: Semiconductor device for direct fuel injection in a DVS internal combustion

SOURCE: Ref. zh. Dvigateli vnutrennego sgoraniya, Abs. 8.39.292

REF SOURCE: Tr. Mosk. energ. in-ta, vyp. 55, 1965, 81-89

TOPIC TAGS: semiconductor device, fuel injection, fuel injector, fuel nozzle, internal combustion engine, internal combustion engine component, engine performance characteristic

ABSTRACT: The "Industrial Electronics" Department of MEI and the "Engine" Department of MAMI carried out research to develop a system of direct fuel injection (with electronic control) in cylinders of DVS four-cycle internal combustion engines. The fuel injection is effected by electromagnetic nozzles installed in front of the inlet valves of the engine cylinders. The nozzles open with the flow of the pulse current to their winding. The pulse duration determines the dose of fuel feed and is regulated by an electronic control unit depending on the operating conditions of the engine. Direct injection, as compared with the carburetor system, increases engine power by <10-15%

Card 1/2 UDC 621.434.038

L 31329-66
ACC NR: AR5025473

and decreases fuel consumption by 5-7%, improves the maneuverability of the engine, and improves the performance characteristics of the engine.

SUB CODE: 10,21/ SUBM DATE: none

Card 2/2

LUKIN, A.A., kand. tekhn. nauk, dotsent; FYN SI-SHAN' [Feng Hsi-shan]

Equivalent circuit of a transistor diode for the calculation of transient processes. Trudy MEI 55:165-176 '65.

Pulse widener using charge storage in a semiconductor diode. Ibid.:177-184

Transient processes in a keying circuit using transistor diodes. Ibid.:185-192 (MIRA 18:10)

L 04478-67 EWT(1) GG

ACC NR: AR6013872 SOURCE CODE: UR/0274/65/000/011/A056/A056

AUTHORS: Lukin, A. A.; Fyn Sishan'

TITLE: Transient processes in a switching circuit using semiconductor diodes

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz', Abs. 11A432

REF SOURCE: Tr. Mosk. energ. in-ta, vyp. 55, 1965, 185-191

TOPIC TAGS: switching circuit, transistorized circuit, circuit theory, semiconductor diode, transient flow /DG-Ts23 semiconductor diode

ABSTRACT: A calculation is presented of the transient process in a switching circuit using semiconductor diodes as proposed by V. N. Malinovskiy (V. N. Malinovskiy and R. R. Kharchenko. Izmeritel'naya tekhnika, 1960, No. 11). The circuit contains two diodes connected in opposition. Diode 1 is connected by the cathode to the ground. A positive control signal is fed via resistance R1 to the point connecting the anodes of diodes 1 and 2. The cathode of 2 is connected via resistance R2 to the negative terminal of the power supply source (-E). The output signal is taken off the cathode of 2; it equals -E when the diodes are nonconducting; it equals ≈ 0 when the control voltage triggers both diodes. With the input of control voltage, forward currents begin to flow through the diodes--the process of establishing these currents can be considered practically instantaneous. The process of accumulating the charge in the bases in the case of brief pulses of forward current can not be successfully

Card 1/2 UDC: 621.374.36:621.382.2

L 04478-67

ACC NR: AR6013872

completed. Upon termination of the control pulse, a reverse dissipation current flows through 1 during a certain time and a forward current flows through 2. Upon termination of the "little shelf" of reverse current of 1, the voltage on it becomes negative and reaches -E. The "little shelf" of reverse current in 2 starts from this moment, after completion of which the reverse current of 2 decreases exponentially. Analytic expressions were obtained for determining the duration of the separate parts of the transient process. An experiment conducted with a circuit using type DG-Ts23 semiconductor diodes showed good agreement with calculations. Bibliography of 3 citations. V. P. [Translation of abstract]

SUB CODE: 09

Card 2/2 egh

LUKIN, A.I.

Gas reflectors and infrared radiation units. Biul.tekhn.-ekon. inform. no.12:33-35 '60. (MIRA 13:12)
(Drying apparatus)

LUKIN, A.I.

Gas reflectors with infrared radiation. Mashinostroitel' no. 4:19-20 Ap '61. (MIRA 14:4)
(Infrared rays---Industrial applications)

ACC NR: AT7002855 (N) SOURCE CODE: UR/3239/66/000/003/0070/0082

AUTHORS: Epel'man, T. Ye.; Obrubov, A. S.; Lukin, A. I.; Baybarak, D. S.; Riske, Yu. S.; Nishchenko, A. Ye.

ORG: none

TITLE: A study of the diesel 4D 19/30 operating on sulfurous fuel with the addition of VNII NP-360 to the lubricating oil

SOURCE: Nikolayev. Korablestroitel'nyy institut. Sudostroyeniye i morskiye sooruzheniya, no. 3, 1966. Susovyye energeticheskiye ustanovki (Ship power equipment), 70-82

TOPIC TAGS: diesel engine, engine lubrication system, diesel fuel, lubricating oil, fuel composition, generator, fuel corrosiveness, lubricant additive/ D-11 lubricating oil, 4D 19-30 diesel engine, VNII NP-360 lubricant additive, SGD 12-24-10A AC generator

ABSTRACT: Studies were conducted at the DVS Laboratory of the Nikolayevsk Ship Building Institute im. Admiral S. O. Makarov (Laboratoriya DVS Nikolayevskogo korablestroitel'nogo instituta) to determine the effect of high sulfur fuel on diesel engine operation, both with and without an additive to the lubricating oil. The diesel, a 4D 19/30 made by the Berislavskiy Machine Construction Plant, was a two-cycle four-cylinder engine producing 160 hp at 500 rpm. Both in practice and on the

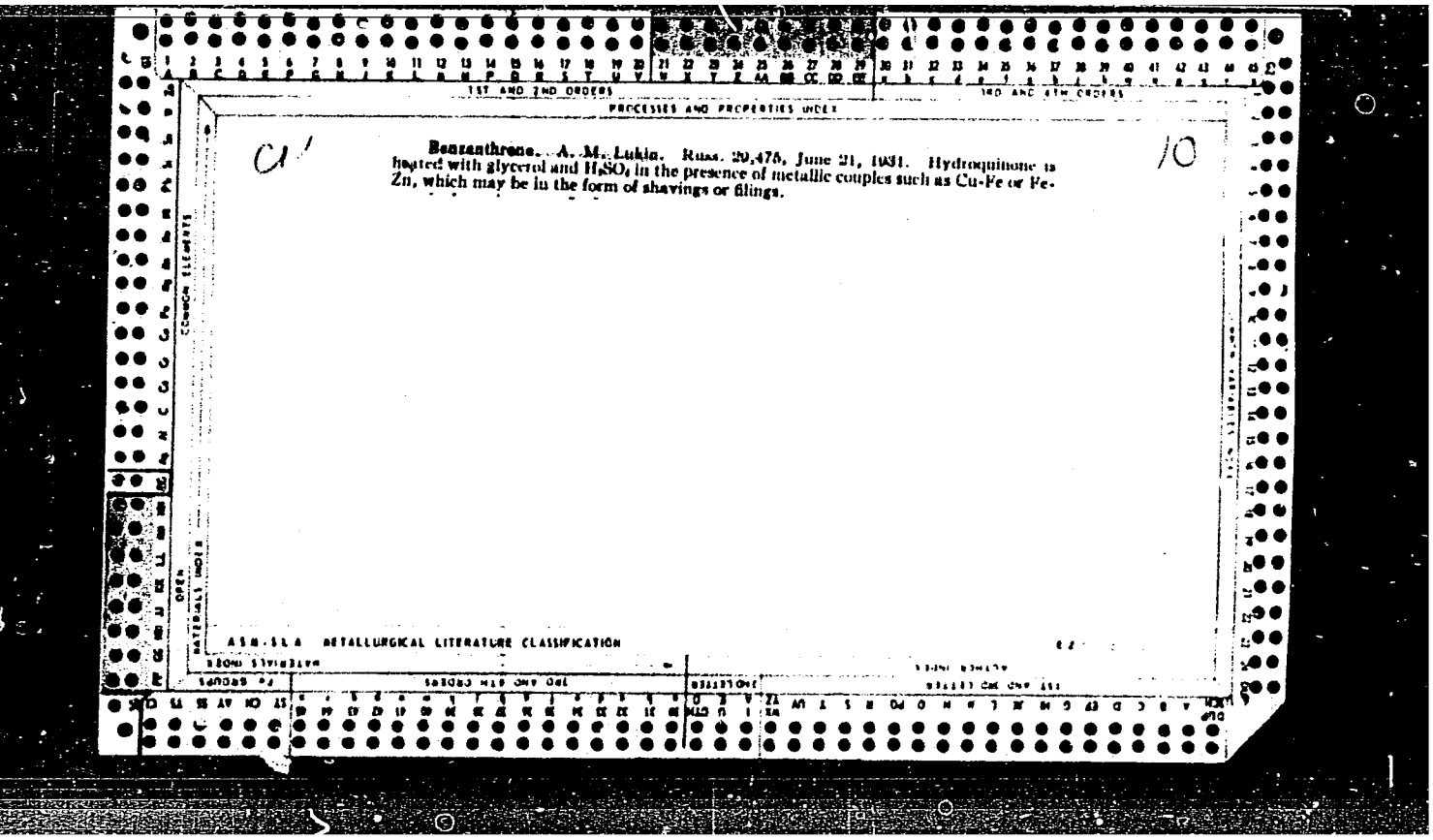
Card 1/2

ACC NR: AT7002855

test stand it drives an SGD 12-24-10A three-phase AC generator. To determine the base data, the engine was turned over hot for 200 hours. The actual test with a fuel containing 0.8% S was done in two stages: the first using lubricating oil D-11, the second using the same oil with an 8% addition of VNII NP-360. Each stage lasted for 300 hours over 7--8 cycles from idle operation to a 10% overload. The study of carbon and other deposits and of the wear of the engine parts was based on micrometer measurements, weights, and test borings of the members. The engine operation was also monitored. There was no engine failure due to the sulfur. The cooling process limited the water temperature to 75C, and further studies should be conducted to determine optimal temperature conditions for high sulfur fuels. Cylinder sleeve wear in the first stage was 12.24 micron and in the second stage -- 1.82. The additive reduced the piston wear by 21.9%, while the addition of VNII NP-360 reduced the total deposits from 41.953 g to 38.745 g. The latter additive also diminished the abrasive nature of the deposits. The use of VNII NP-360 in the lubricant with 1%-sulfur fuels is said to increase diesel lifetime by 15--20%. Orig. art. has: 5 figures and 9 tables.

SUB CODE: 21/ SUBM DATE: none/ ORIG REF: 012

Card 2/2



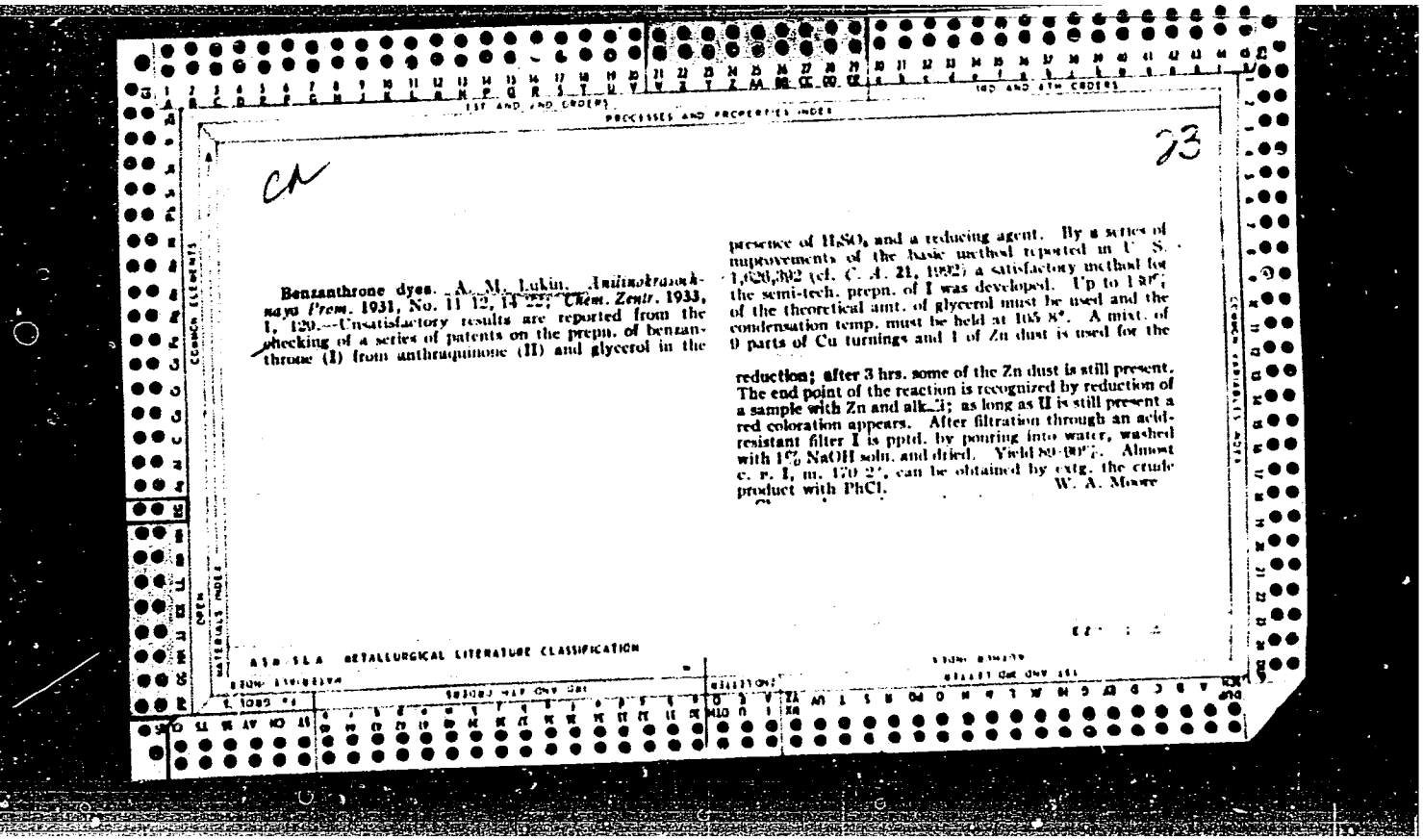
PROCESSES AND PROPERTIES INDEX

C4

10

Benzanthrene. A. M. Lukin. Russ. 20,478, June 21, 1931. Hydroquinone is heated with glycerol and H_2SO_4 in the presence of metallic couples such as Cu-Fe or Fe-Zn, which may be in the form of shavings or filings.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



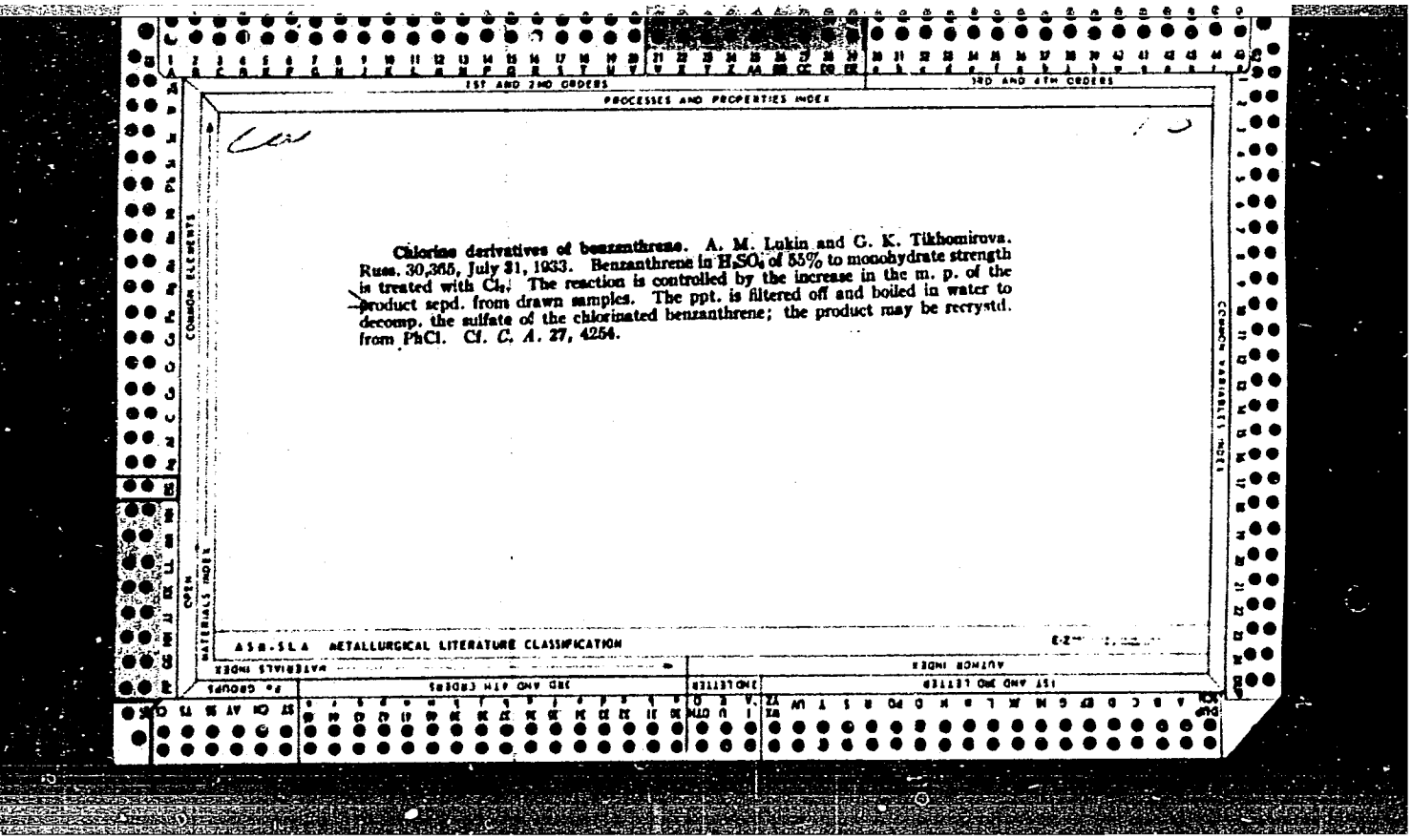
PROCESSES AND PROPERTIES INDEX

23

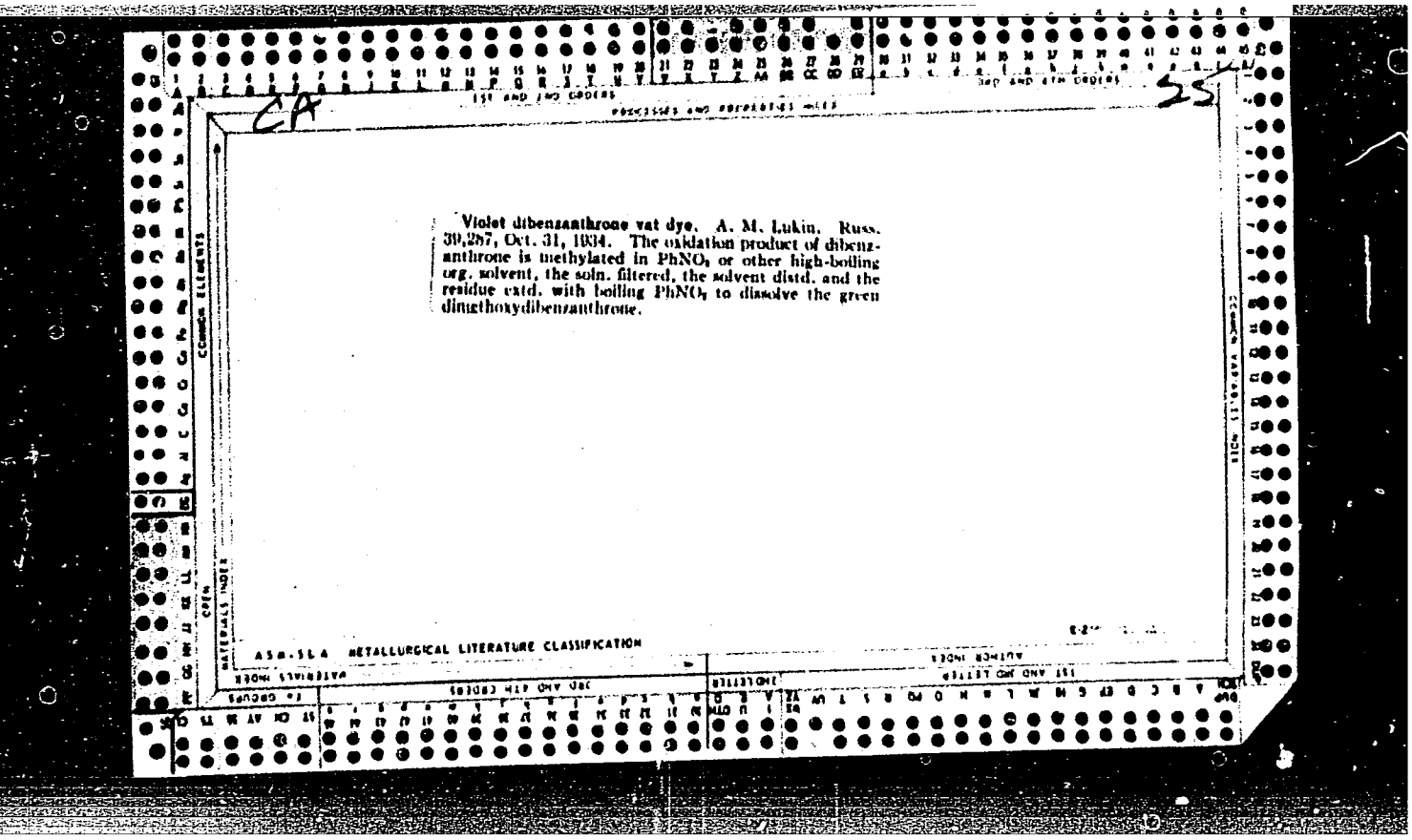
CA

Benzanthrone dyes. A. M. Lukin. *Anilinokrasochnaya Prom.* 1931, No. 11/12, 14-22; *Chem. Zentr.* 1933, I, 129.—Unsatisfactory results are reported from the checking of a series of patents on the prepn. of benzanthrone (I) from anthraquinone (II) and glycerol in the presence of H_2SO_4 and a reducing agent. By a series of improvements of the basic method reported in U. S. 1,620,302 (cf. C. A. 21, 1092) a satisfactory method for the semi-tech. prepn. of I was developed. Up to 130% of the theoretical amt. of glycerol must be used and the condensation temp. must be held at 105-8°. A mixt. of 9 parts of Cu turnings and 1 of Zn dust is used for the reduction; after 3 hrs. some of the Zn dust is still present. The end point of the reaction is recognized by reduction of a sample with Zn and alk.; as long as II is still present a red coloration appears. After filtration through an acid-resistant filter I is ppted. by pouring into water, washed with 1% NaOH soln. and dried. Yield 80-90%. Almost c. p. I, m. 170-2°, can be obtained by extg. the crude product with PhCl. W. A. Moore

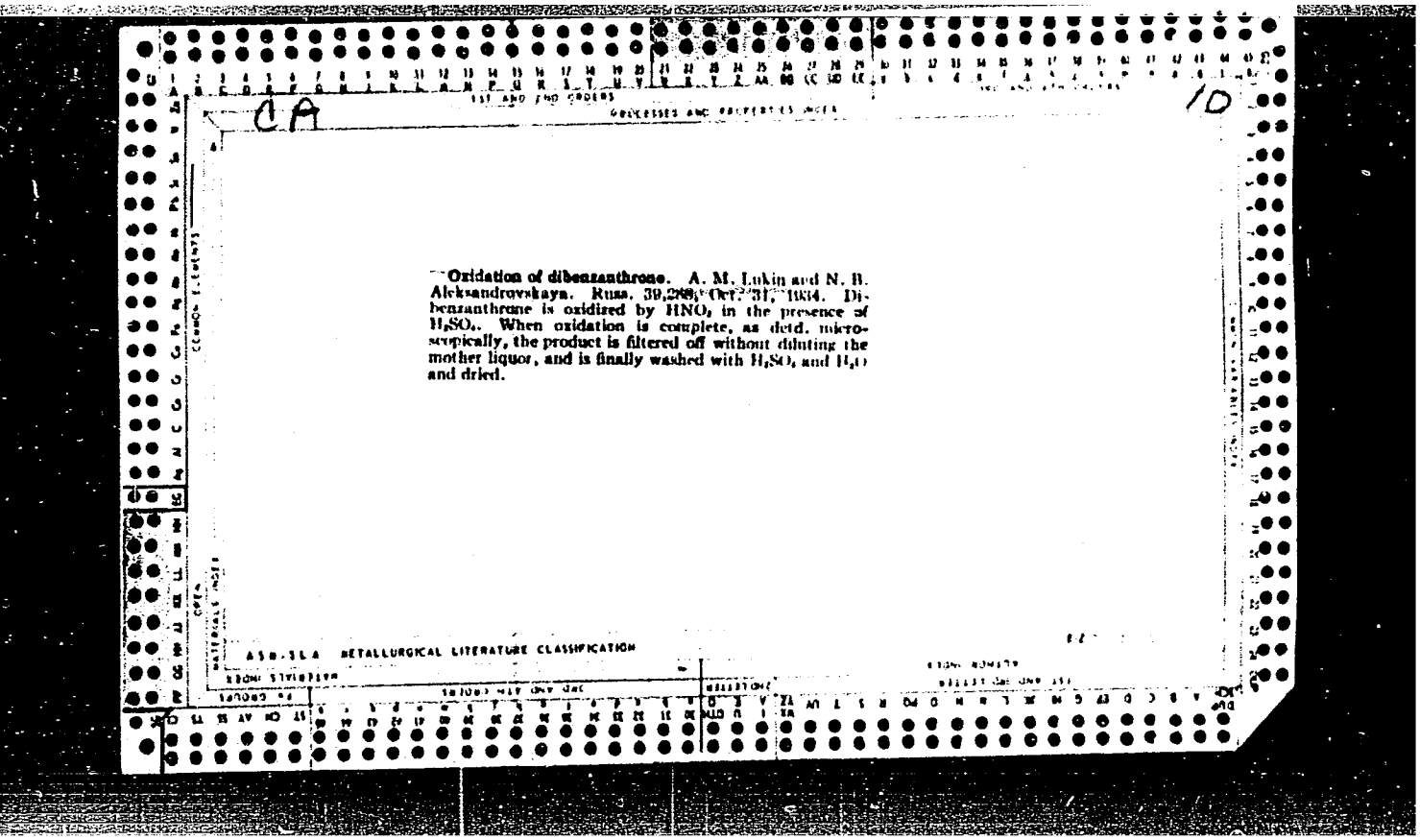
ASM SLA METALLURGICAL LITERATURE CLASSIFICATION



Chlorine derivatives of benzanthrene. A. M. Lukin and G. K. Tikhomirova. Russ. 30,365, July 31, 1933. Benzanthrene in H_2SO_4 of 55% to monohydrate strength is treated with Cl_2. The reaction is controlled by the increase in the m. p. of the product sepd. from drawn samples. The ppt. is filtered off and boiled in water to decomp. the sulfate of the chlorinated benzanthrene; the product may be recrystd. from PhCl. Cf. *C. A.* 27, 4254.



Violet dibenzanthrone vat dye. A. M. Lukin. Russ. 39,287, Oct. 31, 1934. The oxidation product of dibenzanthrone is methylated in $PhNO_2$ or other high-boiling org. solvent, the soln. filtered, the solvent distd. and the residue extd. with boiling $PhNO_2$ to dissolve the green dimethoxydibenzanthrone.

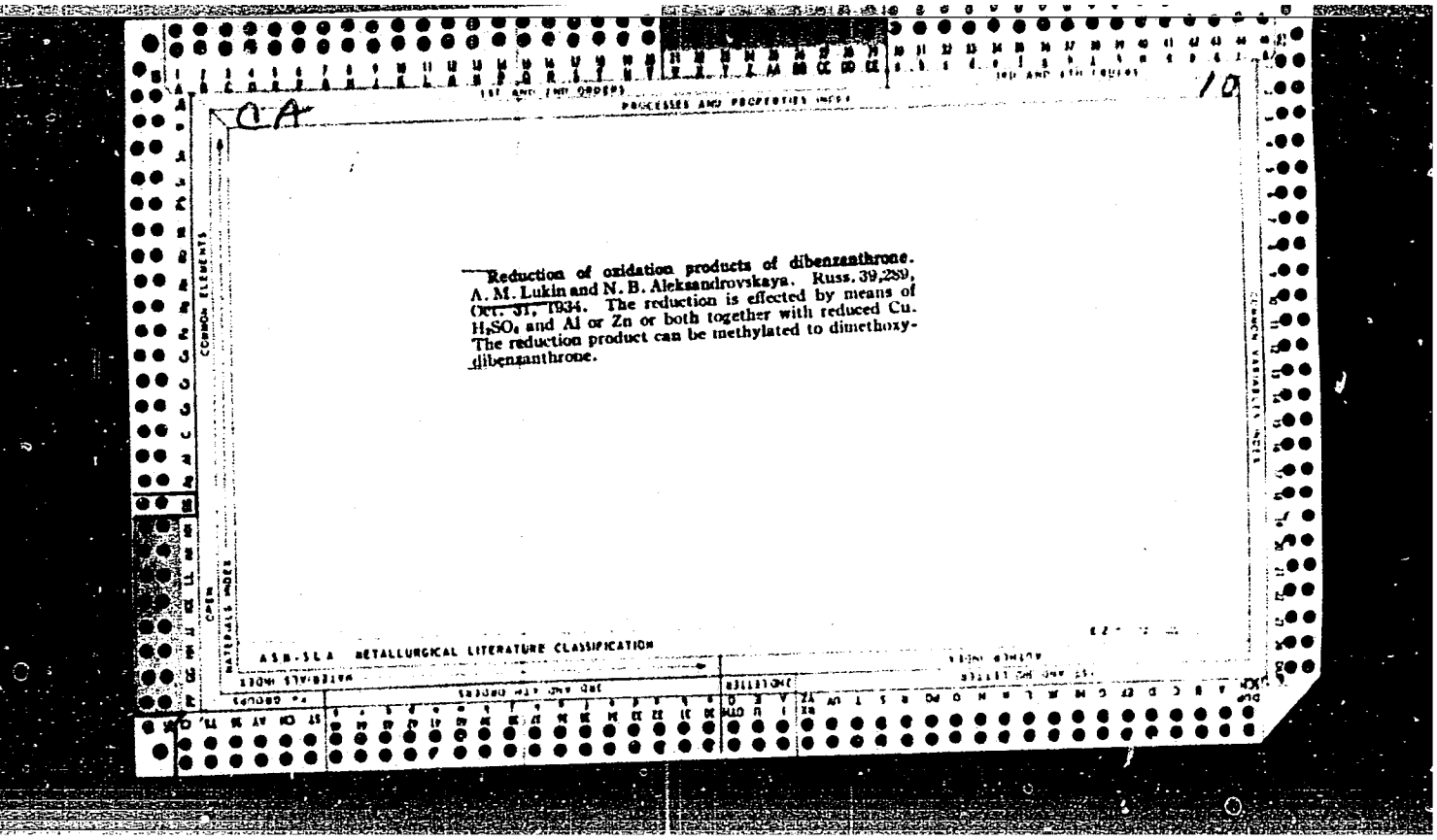


CA

10

Oxidation of dibenzanthrone. A. M. Lukin and N. B. Aleksandrovskaya. Russ. 39,268, Oct. 31, 1934. Dibenzanthrone is oxidized by HNO_3 in the presence of H_2SO_4. When oxidation is complete, as detd. microscopically, the product is filtered off without diluting the mother liquor, and is finally washed with H_2SO_4 and H_2O and dried.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

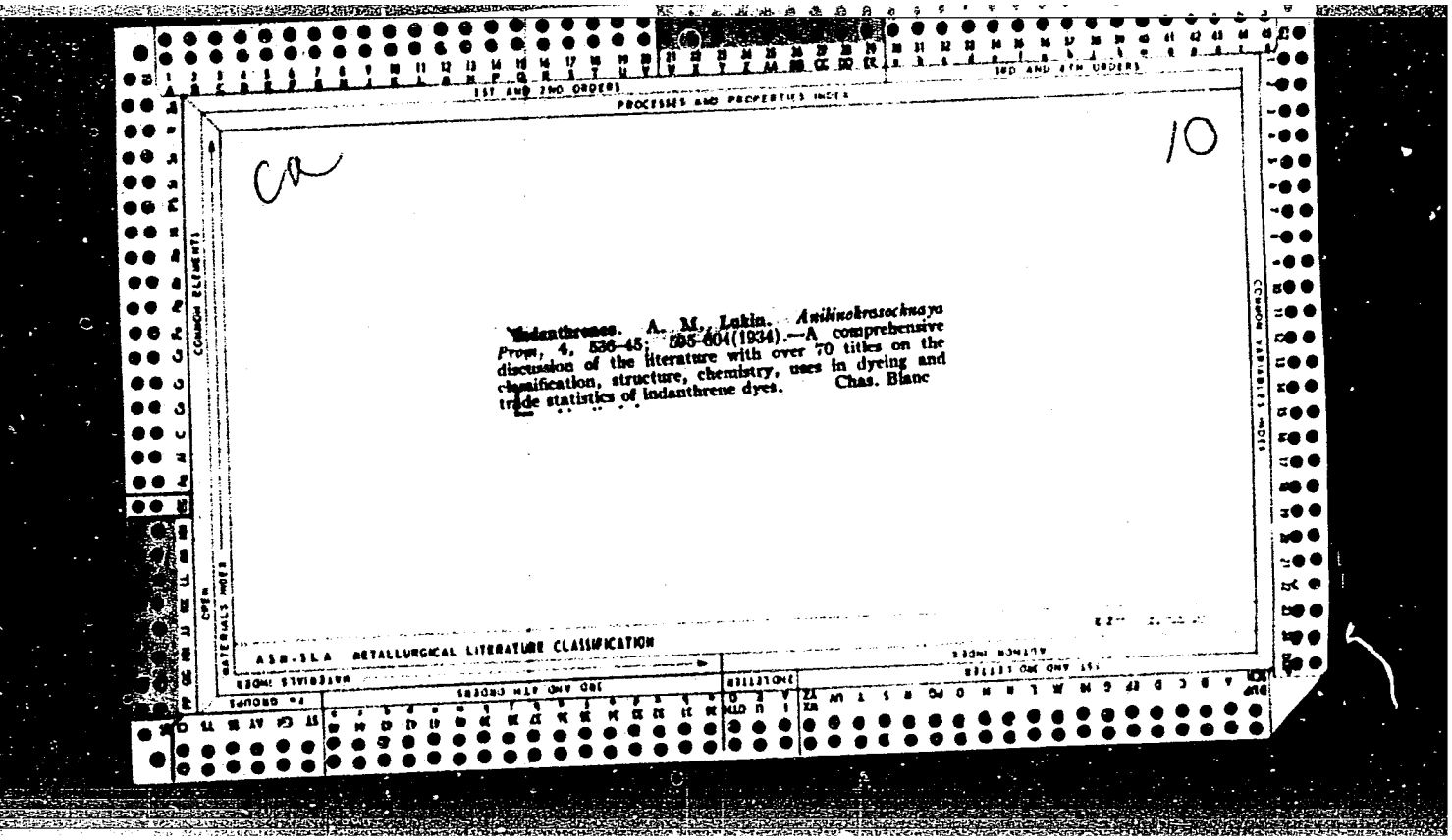


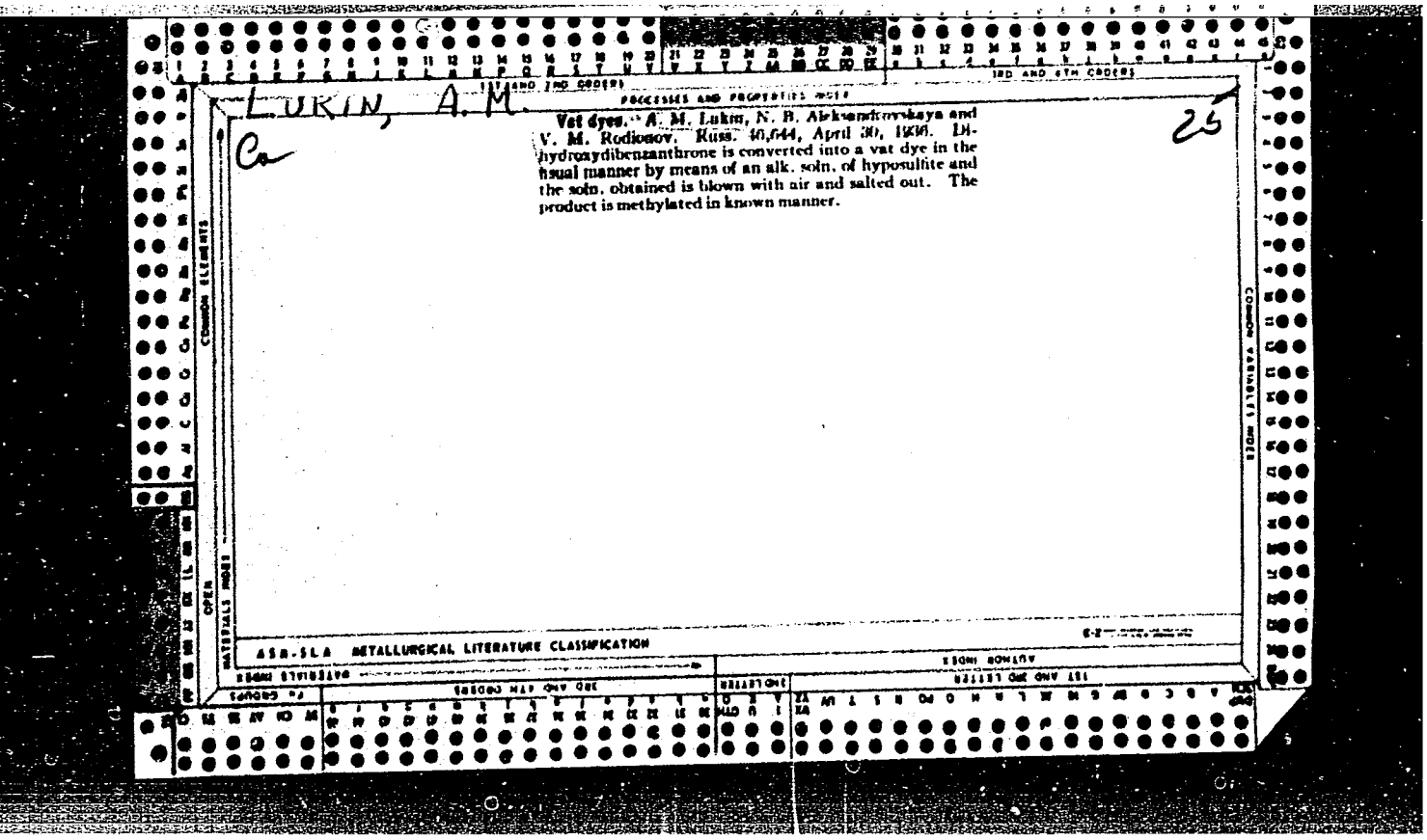
CA

10

Reduction of oxidation products of dibenzanthrone. A. M. Lukin and N. B. Aleksandrovskaya. Russ. 39,289, Oct. 31, 1934. The reduction is effected by means of H_2SO_4 and Al or Zn or both together with reduced Cu. The reduction product can be methylated to dimethoxydibenzanthrone.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION





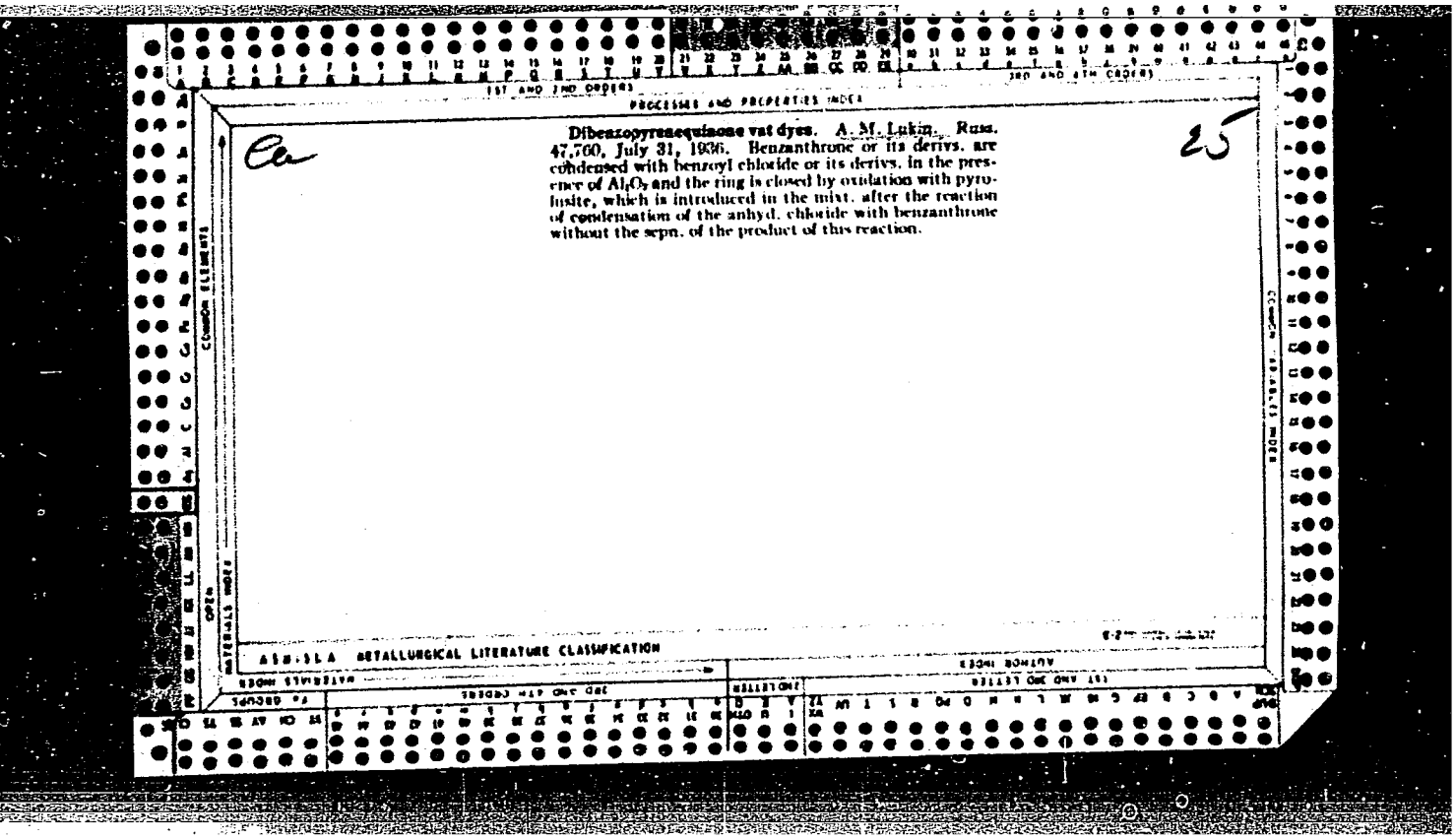
LUKIN, A. M.

Co

25

Vat dyes. A. M. Lukin, N. B. Aleksandrovskaya and V. M. Rodionov. Russ. 40,644, April 30, 1936. Dihydroxydibenzanthrone is converted into a vat dye in the usual manner by means of an alk. soln. of hyposulfite and the soln. obtained is blown with air and salted out. The product is methylated in known manner.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION



Ca

Dibenzopyrenequinone vat dyes. A. M. Lukin. Russ. 47,760, July 31, 1936. Benzanthrone or its derivs. are condensed with benzoyl chloride or its derivs. in the presence of Al_2O_3 and the ring is closed by oxidation with pyrolusite, which is introduced in the mixt. after the reaction of condensation of the anhyd. chloride with benzanthrone without the sepn. of the product of this reaction.

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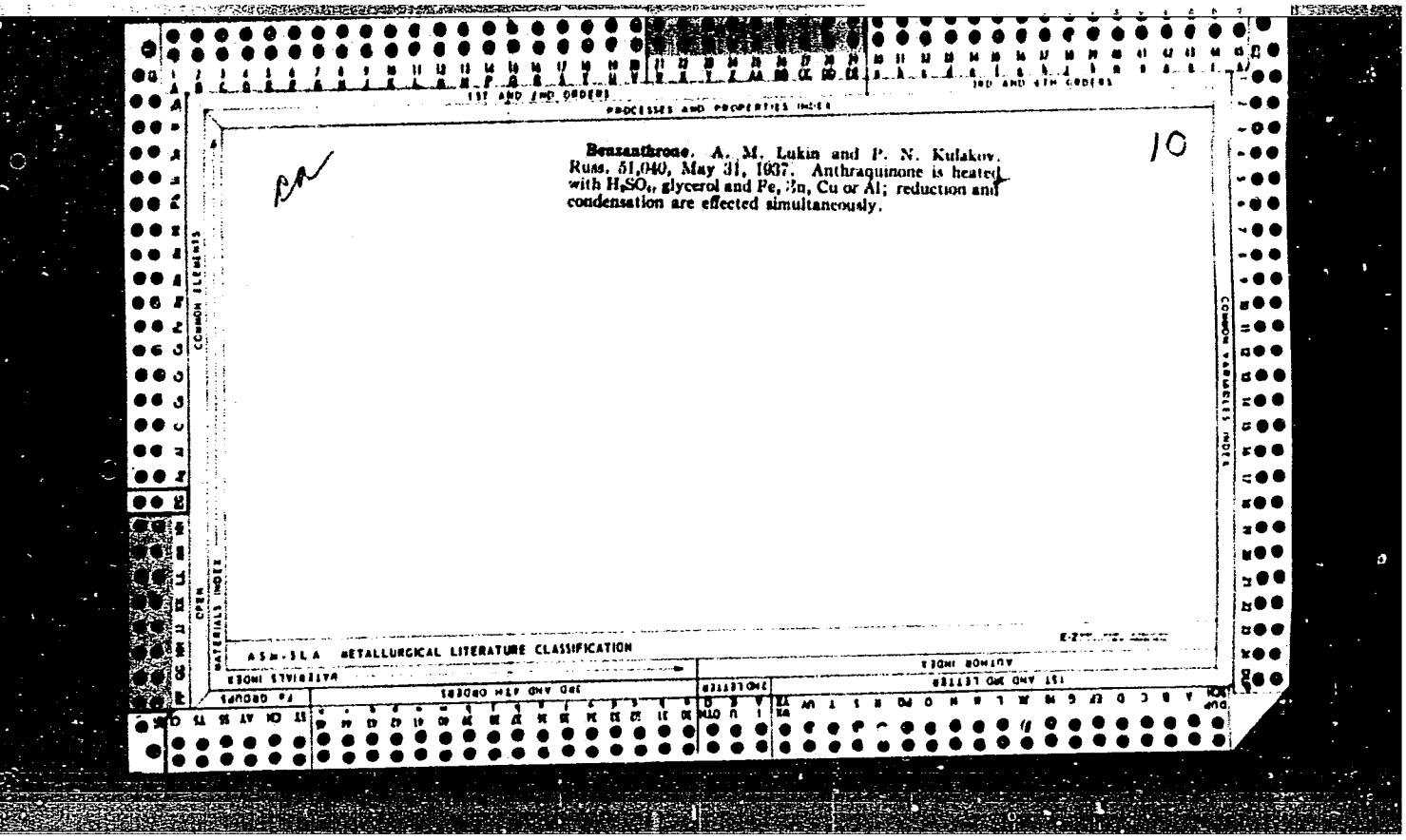

Benzanthrone. A. M. Lukin and P. N. Kulakov, Russ. 51,040, May 31, 1937. Anthraquinone is heated with H_2SO_4, glycerol and Fe, Zn, Cu or Al; reduction and condensation are effected simultaneously.